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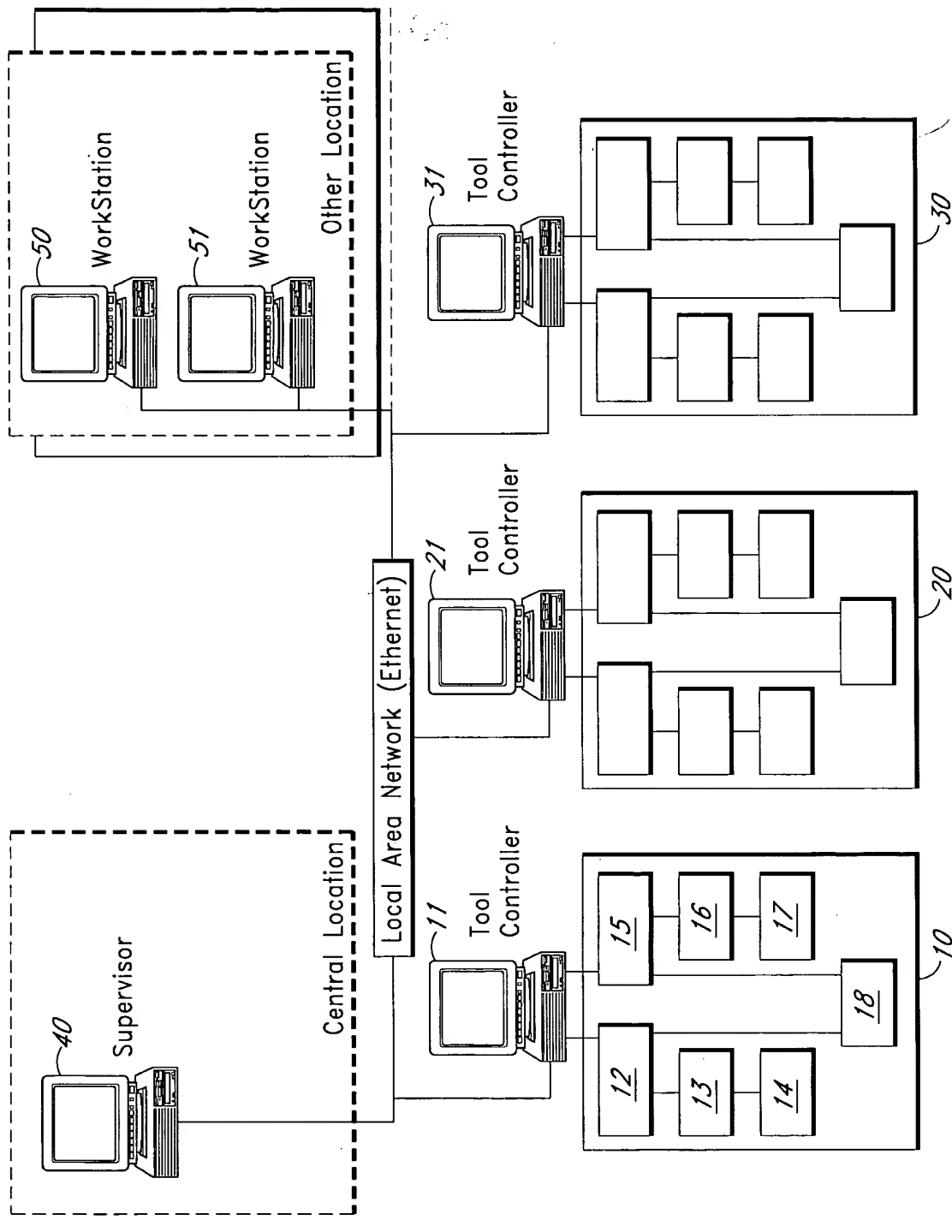


FIG. 1

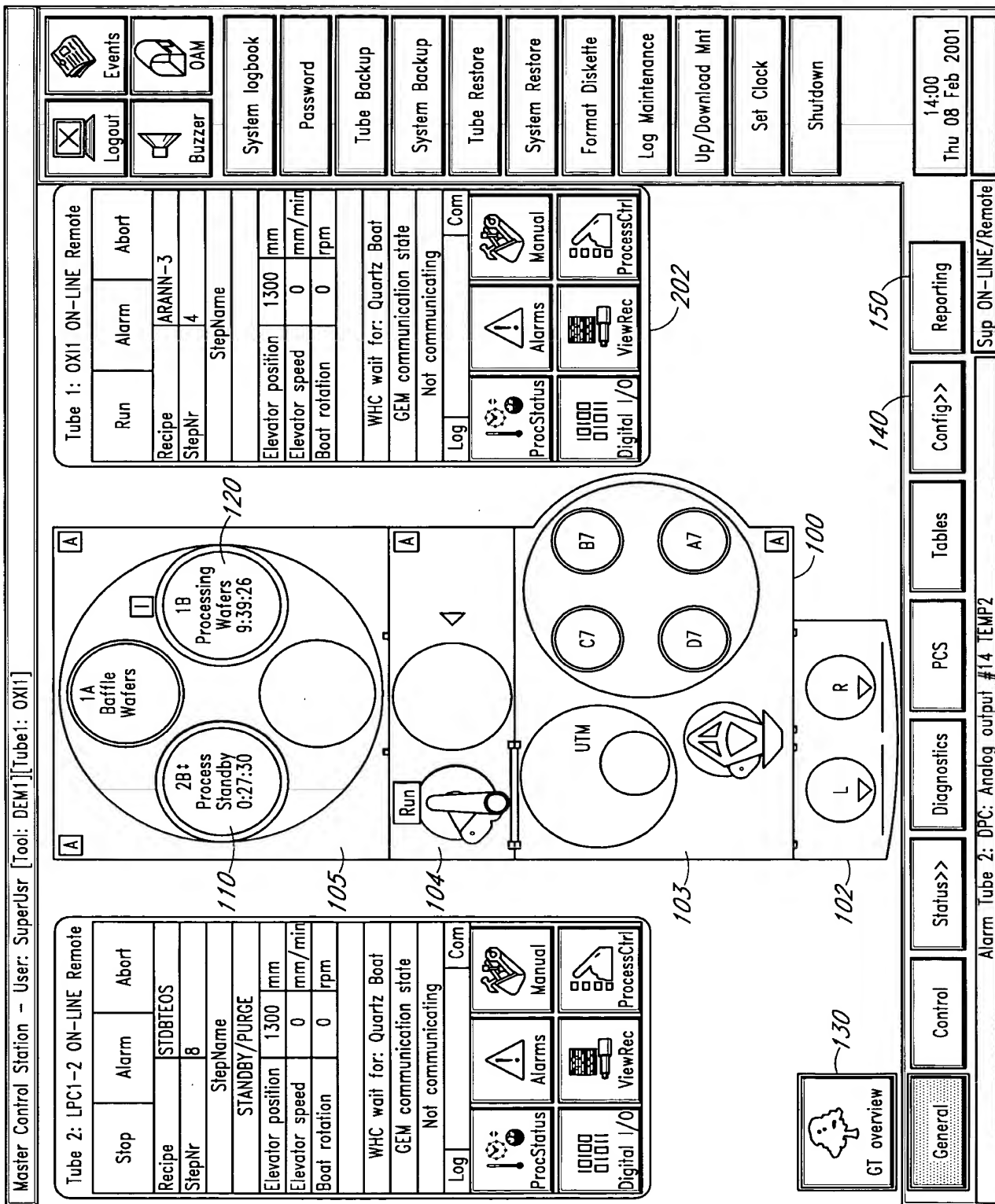


FIG. 2



Report: Green Tool overview - [Tool: DEM1]

Start time: 2000-10-01 00:00:00

End time: 2000-11-01 23:59:59

Channel	Unit	T1: OX11	T2: LPC1-2	Σ		
Ar	SL	8182.59	-	8182.59		Δ
DCS	SL	-	455.40	455.40		
Exhaust	M <sup>3</sup>	11309540.24	11252595.11	22562135.35		
H2	SCC	8447.01	-	8447.01		
N2	SL	433219.72	1876721.98	2309941.70		
N2 Carousel	SL	354198.17	-	354198.17		
N2 Purge	SL	193544.55	6305.37	199849.92		
N2-Bubbl	SL	360.59	-	360.59		
NH3	SL	-	0.00	0.00		
N0	SL	259.55	-	259.55		
O2	SL	12991.83	-	12991.83		
PH3/N2	SCC	-	1391717.47	1391717.47		
Power	Kwh	53.87	41.28	95.15		
SiH4	SL	-	0.00	0.00		
Teos	SL	-	5613.88	5613.88		
Water	L	1945579.87	15893389.20	3534918.07		Δ
Δ						Δ

Exit

Filter

Print

Print Setup

Export

Alarm Tube 2: WHC: BTM Arm: WHR door switch

FIG. 3



170 4/11

Master Control Station - User: SuperUsr [Tool: DEM1][Tube1: OX11]

Tube 2: LPC1-2

Stop	Alarm	Abort
Recipe	STDBTEOS	
StepNr	8	
StepName		
STANDBY/PURGE		
Elevator position	1300	mm
Elevator speed	0	mm/min
Boat rotation	0	rpm
WHC wait for: Operation Mode		
GEM communication state		
Disabled		
Log	Com	
ProcStatus	Alarms	Manual
10100 01011	ViewRec	ProcessCtrl
Digital I/O		

1A Baffle  
Wafers

1B  
Move to  
Process  
999:99:99

2B+  
Process  
Standby  
0:27:30

Stop

UTM

C5

D5

B5

A5

L

R

A

Tube 1: OX11

Run	Alarm	Abort
Recipe	T1MAIN	
StepNr	1	
StepName		
Elevator position	1300	mm
Elevator speed	0	mm/min
Boat rotation	0	rpm
WHC wait for: Operation Mode		
GEM communication state		
Disabled		
Log	Com	
ProcStatus	Alarms	Manual
10100 01011	ViewRec	ProcessCtrl
Digital I/O		

Events

OAM

Configuration

User Interface

Recipe Sequence

Safety Interlocks

Green Tool

INL Configuration

Logout

Buzzer

GT overview

<<Config

DPC

DTC

WHC

CHC

MSC

Alarm Tube 2: DPC: Analog output #13 TEMP1

15:41  
Fri 02 Feb 2001

FIG. 4



Green Tool Configuration editor - [ Tool: DEM1 ]

Consumables

N2 (oxi1)

N2-Bubbl (oxi1)

N2 Carousel () [MANUAL EDIT]

O2 (oxi1)

NO (oxi1)

Ar (oxi1)

H2 (OXI1)

Exhaust (OXI1)

Water (OXI1)

N2 Purge (OXI1)

Power (OXI1)

N2 () [MANUAL EDIT]

SiH4 () [MANUAL EDIT]

NH3 () [MANUAL EDIT]

Edit

New

Delete

Print all Consumables

Save and Exit

Exit

WHC

DTC

DPC

<<Config

WNC

CHC

MSC

Alarm Tube 2: WHC: House vacuum

Logout

Events

Buzzer

OAM

Configuration

User Interface

Recipe Sequence

Safety Interlocks

Green Tool

INL Configuration

15:42

Fri 02 Feb 2001

FIG. 5



6/11

Green Tool Configuration editor - [ Tool: DEM1 ]

Consumable:	02	Source	oxi1	Units	SL	measured per	Minute	>>
I/O Channel	Correction	When	=	(and)				
A0 3: 02-High	>>	>>	>>	>>	>>	>>	>>	>>
+ A0 4: 02-Low	>>	/	1000	>>	>>	1	>>	>>
+	>>	>>	>>	>>	>>	>>	>>	>>
+	>>	>>	>>	>>	>>	>>	>>	>>
+	>>	>>	>>	>>	>>	>>	>>	>>
+	>>	>>	>>	>>	>>	>>	>>	>>
+	>>	>>	>>	>>	>>	>>	>>	>>
+	>>	/	>>	>>	>>	>>	>>	>>
+	>>	>>	>>	>>	>>	>>	>>	>>

OK Cancel

<<Config DPC DTC WHC CHC MSC

Alarm Tube 1: WHC: BTM Arm: WHR door switch

12:13  
Fri 02 Feb 2001

Events  
CAM  
Logout  
Buzzer  
Configuration  
User Interface  
Recipe Sequence  
Safety Interlocks  
Green Tool  
IHL Configuration

FIG. 6



7/11

Green Tool Configuration editor - [ Tool: DEM1 ]

Consumable: Power

Source OX1

Units Kwh

measured per Hour

>>

I/O Channel	Correction	When	=	(and)
+ Power zone: 1	>> *	6.327	>>	>>
+ Power zone: 2	>> *	28.319	>> 1	>>
+ Power zone: 3	>> *	28.92	>>	>>
+ Power zone: 4	>> *	10.283	>>	>>
+ Power zone: 5	>> *	13.283	>>	>>
+ Power zone: 6	>> *	4.964	>>	>>
+	>> /	100	>>	>>
+	>>		>>	>>

OK

Cancel

<<Config

DPC

DTC

WHC

CHC

MSC

Alarm Tube 2: DPC: Analog output #13 TEMPI

12:12  
Fri 02 Feb 2001

Logout

Events

Buzzer

OAM

Configuration

User interface

Recipe Sequence

Safety Interlocks

Green Tool

Int. Configuration

FIG. 7

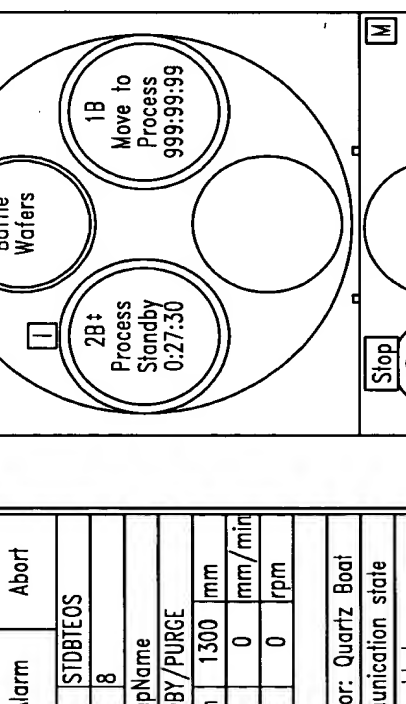


### Master Control Station - User: SuperUser [Tool: DEM1][Tube1: OX11]

15:41  
Fri 02 Feb 2001

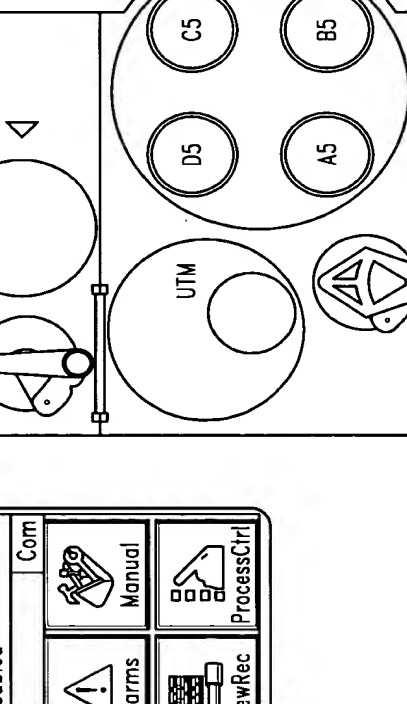
#### Tube 2: LPC1-2

Stop	Alarm	Abort
Recipe STDBTEOS		
StepNr 8		
StepName STANDBY/PURGE		
Elevator position	1300	mm
Elevator speed	0	mm/min
Boat rotation	0	rpm
WHC wait for: Quartz Boat		
GEM communication state Disabled		
Log		Com
ProcStatus	Alarms	Manual
Digital I/O	ViewRec	ProcessCtrl



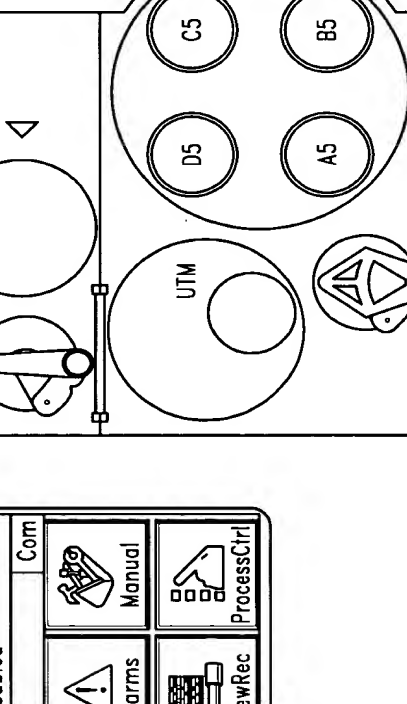
#### Tube 1: OX11

Run	Alarm	Abort
Recipe T1MAIN		
StepNr 1		
StepName		
Elevator position	1300	mm
Elevator speed	0	mm/min
Boat rotation	0	rpm
WHC wait for: Quartz Boat		
GEM communication state Disabled		
Log		Com
ProcStatus	Alarms	Manual
Digital I/O	ViewRec	ProcessCtrl



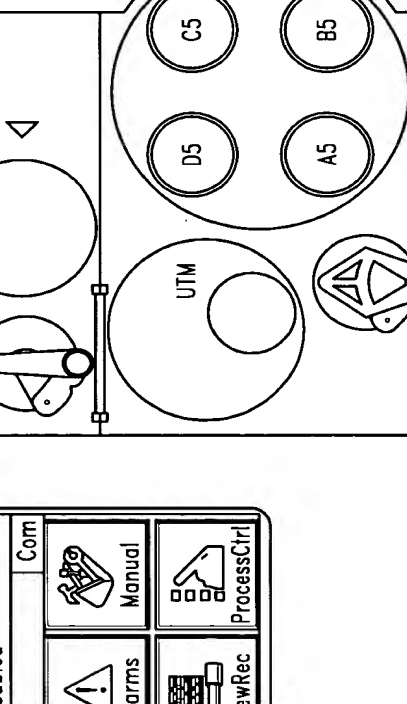
#### Tube 3: LPC1-2

Stop	Alarm	Abort
Recipe STDBTEOS		
StepNr 8		
StepName STANDBY/PURGE		
Elevator position	1300	mm
Elevator speed	0	mm/min
Boat rotation	0	rpm
WHC wait for: Quartz Boat		
GEM communication state Disabled		
Log		Com
ProcStatus	Alarms	Manual
Digital I/O	ViewRec	ProcessCtrl



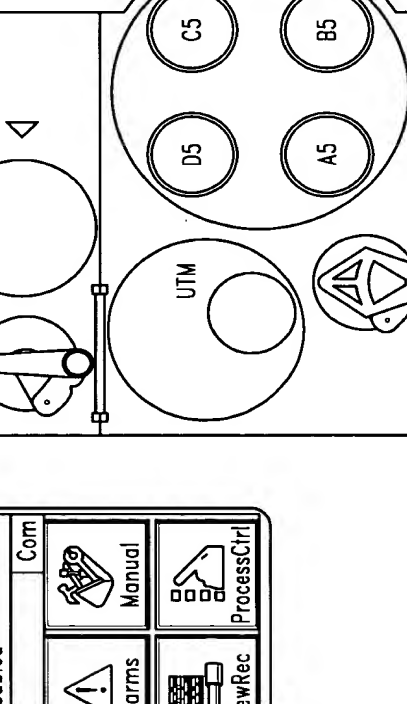
#### Tube 4: LPC1-2

Stop	Alarm	Abort
Recipe STDBTEOS		
StepNr 8		
StepName STANDBY/PURGE		
Elevator position	1300	mm
Elevator speed	0	mm/min
Boat rotation	0	rpm
WHC wait for: Quartz Boat		
GEM communication state Disabled		
Log		Com
ProcStatus	Alarms	Manual
Digital I/O	ViewRec	ProcessCtrl



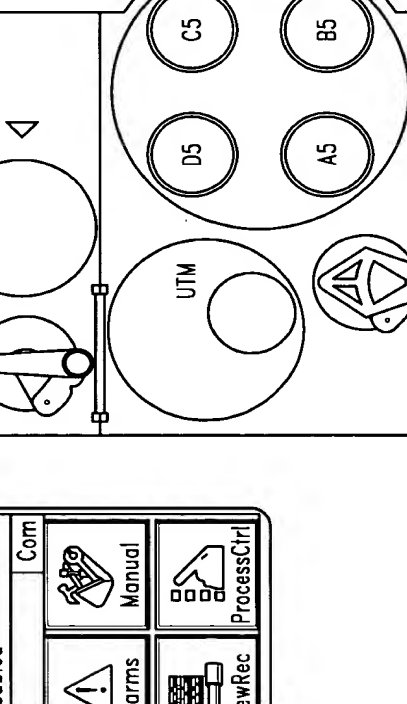
#### Tube 5: LPC1-2

Stop	Alarm	Abort
Recipe STDBTEOS		
StepNr 8		
StepName STANDBY/PURGE		
Elevator position	1300	mm
Elevator speed	0	mm/min
Boat rotation	0	rpm
WHC wait for: Quartz Boat		
GEM communication state Disabled		
Log		Com
ProcStatus	Alarms	Manual
Digital I/O	ViewRec	ProcessCtrl



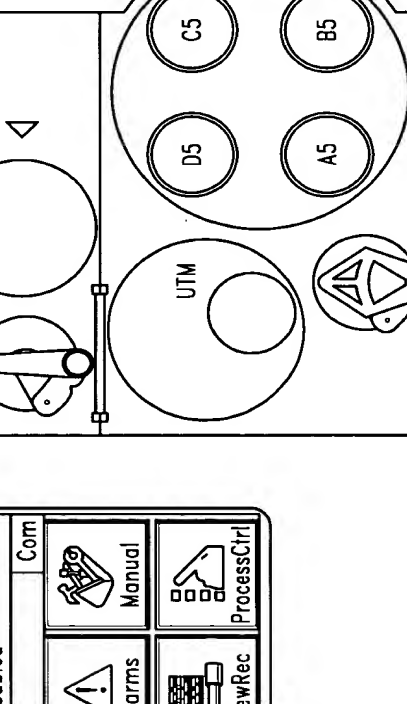
#### Tube 6: LPC1-2

Stop	Alarm	Abort
Recipe STDBTEOS		
StepNr 8		
StepName STANDBY/PURGE		
Elevator position	1300	mm
Elevator speed	0	mm/min
Boat rotation	0	rpm
WHC wait for: Quartz Boat		
GEM communication state Disabled		
Log		Com
ProcStatus	Alarms	Manual
Digital I/O	ViewRec	ProcessCtrl



#### Tube 7: LPC1-2

Stop	Alarm	Abort
Recipe STDBTEOS		
StepNr 8		
StepName STANDBY/PURGE		
Elevator position	1300	mm
Elevator speed	0	mm/min
Boat rotation	0	rpm
WHC wait for: Quartz Boat		
GEM communication state Disabled		
Log		Com
ProcStatus	Alarms	Manual
Digital I/O	ViewRec	ProcessCtrl



#### Tube 8: LPC1-2

Stop	Alarm	Abort
Recipe STDBTEOS		
StepNr 8		
StepName STANDBY/PURGE		
Elevator position	1300	mm
Elevator speed	0	mm/min
Boat rotation	0	rpm
WHC wait for: Quartz Boat		
GEM communication state Disabled		
Log		Com
ProcStatus	Alarms	Manual
Digital I/O	ViewRec	ProcessCtrl



9/11

Report: Green Tool detail - [Tool: DEM1][Tubel: OX1]

Star

Time Stamp

Report Search Criteria

Quick select

This Day

This Week

This Month

Resolution select

Calendar week

Time Span

Start

Mon

Week

22

29

May

2000

End

Sun

Week

26

02

Jul

2000

23

59

59

00

00

00

lock

Sample date:

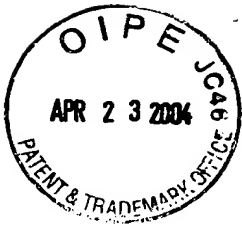
Exit

Ok

Cancel

Alarm Tube 2: WHC: House vacuum

FIG. 9



10/11

Report: Green Tool detail - [Tool: DEM1][Tubet: OX1]

Start time: 200

Time Stamp

Channels Selection

Available channels

N2

N2 - Bubbl

N2 Carousel

O2

N0

Ar

H2

Exhaust

Water

N2 Purge

Power

Add to selection>>

Selected channels

Nr of channels: 6

N0

N2 Carousel

Ar

N2 Purge

Power

N2

Delete

Delete all

Sample date:

Exit

Ok

Cancel

Unmark Block

FIG. 10

Alarm Tube 2: WHC: House vacuum



Report: Green Tool detail - [Tool: DEM1][Tubel: OX11]

Start time: [2000-05-29 00:00:00] End time: [2000-07-02 23:59:59]

Time Stamp	N <sub>2</sub> SL	N <sub>2</sub> Carusel SL	Ar SL	N <sub>2</sub> Purge SL	Power kWh	N <sub>2</sub> SL
Wk22 2000-05-29	0.00	292433.27	95.20	46078.92	7.96	98484.69
Wk23 2000-06-05	0.00	209270.93	100.10	30542.02	7.89	97302.21
Wk24 2000-06-12	0.00	56008.93	101.35	15117.32	25.80	62757.88
Wk25 2000-06-19	0.00	248741.58	104.47	49076.31	6.46	96316.30
Wk26 2000-06-26	0.00	166886.02	55.41	19722.24	3.80	52603.92

Σ 0.00 973340.73 456.53 160536.81 51.91 407465.00

Sample date: [2000-05-29] Sample Nr: [1] Nr of samples: [5]

Exit Filter Channel choice Print Print Setup Export Mark Block Unmark Block

Alarm Tube 2: WHC: BTM Elevator: Timeout

FIG. 11